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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/652,750 | 08/28/2003 | David Elliott Norton JR. | 249212022500 | 1756 |

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| EXAMINER |
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NEGRON, DANIEL L

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| ART UNIT | PAPER NUMBER |
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2651

DATE MAILED: 08/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/652,750

Applicant(s)

NORTON, DAVID ELLIOTT

Examiner

Daniell L. Negrón

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 August 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-46 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 7, 18-21, 24 and 35-46 is/are rejected.
- 7) ☒ Claim(s) 5, 6, 8-17, 22, 23 and 25-34 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>8 April 2005</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 1, 18, and 29-33 are objected to because of the following informalities:

Regarding claims 1 and 18, the definition of the variables “first delta” and “second delta” are not provided.

Regarding claims 29-33, it is improper for apparatus claims 29-33 to depend from method claim 1.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4, 7, 18-21, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Bailey et al U.S. Patent No. 5,363,100.

Regarding claims 18-21, Bailey et al disclose a correlation receiver for detecting peaks of a correlation signal, the correlation receiver comprising a master peak detector for determining whether an amplitude of a pulse of the correlation signal exceeds by at least a first delta (i.e. V_A) an amplitude of a prior peak (i.e. threshold value); and, if so, designating the pulse as a peak and setting an amplitude of the peak as the amplitude of the prior peak increased by a second delta (column 7, lines 32-45). It is considered that the first delta (i.e. V_A) is the value that is used

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to increase (i.e. nondecreasing) the value of the prior peak, therefore it is considered that Bailey et al discloses that the first delta equals the second delta.

Regarding claim 24, Bailey et al disclose a correlation receiver wherein the master peak detector determines whether the amplitude of the correlation signal pulse falls below an amplitude of the prior peak less a droop value (e.g. falls below peak-detection threshold), and, if so, the master peak detector does not designate the pulse as a peak (column 7, lines 2-18).

Regarding claims 1-4 and 7, method claims 1-4 and 7 are drawn to the method of using the corresponding apparatus claimed in claims 18-21 and 24. Therefore method claims 1-4 and 7 correspond to apparatus claims 18-21 and 24 and are rejected for the same reasons of anticipation as used above.

3. Claims 35 and 41 are rejected under 35 U.S.C. 102(e) as being anticipated by Kim U.S. Patent No. 6,762,712.

Regarding claim 41, Kim discloses a correlation receiver for detecting a pulse input signal comprising a bandpass filter, having a transfer function shape, for bandpass filtering the input signal, a correlation filter (1191) for correlation filtering the bandpass filtered signal, the correlation filter having a transfer function shape substantially similar to the transfer function shape of the bandpass filter, and a detector (1194) for detecting peaks of the correlation filtered signal (column 26, lines 59-67 and column 27, lines 1-25).

Regarding claim 35, method claim 35 is drawn to the method of using the corresponding apparatus claimed in claim 41. Therefore method claim 35 corresponds to apparatus claim 41 and is rejected for the same reasons of anticipation as used above.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 36 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim U.S. Patent No. 6,762,712 in view of Stein et al U.S. Patent No. 6,469,862.

Regarding claim 42, Kim discloses a correlation receiver comprising all the limitations of claim 41 as discussed above but fails to show the correlation signal peaks corresponding to positions of marks on a medium, wherein the bandpass filter attenuates frequencies above a cutoff frequency which is determined by a low-noise frequency response region of a spectrum representative of each mark.

However, Stein et al discloses a device wherein signals from marks on a medium (i.e. servo) are detected and passed through a bandpass filter. The cutoff frequency of the bandpass filter is determined according to the spectrum of the marks for the purpose reduce noise in detected servo signals (column 2, lines 17-36, column 2, lines 50-54, and column 3, lines 43-47).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the disclosure of Kim with the teachings of cutoff frequency in a bandpass filter by Stein et al in order to obtain a device where signal to noise ratio is improved of servo signal detection in read channels.

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Regarding claim 36, method claim 36 is drawn to the method of using the corresponding apparatus claimed in claim 42. Therefore method claim 36 corresponds to apparatus claim 42 and is rejected for the same reasons of obviousness as used above.

6. Claims 37-40 and 43-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kim U.S. Patent No. 6,762,712 as modified by Stein et al U.S. Patent No. 6,469,862 and further in view of Saliba et al U.S. Patent No. 6,558,774.

Regarding claims 43-46, Kim as modified by Stein et al disclose a correlation receiver with all the limitations of claim 42 as discussed above but fail to show the specifics of a medium being a magnetic tape wherein the servo marks are optically detectable on the tape opposite a magnetic surface of the tape.

However, Saliba et al disclose a magnetic tape comprising a structure, which allows for optical servo marks to be recorded on the opposite site (i.e. backcoat) of the magnetic surface of the tape for the purpose of increasing the data area of the magnetic tape (column 3, lines 1-10 and column 4, lines 46-63).

Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to combine the teachings of Kim as modified by Stein et al with the disclosure of Saliba et al in order to obtain a magnetic tape servo detecting device with increased data density and high signal to noise ratio.

Regarding claims 37-40, method claims 37-40 are drawn to the method of using the corresponding apparatus claimed in claims 43-46. Therefore method claims 37-40 correspond to apparatus claims 43-46 and are rejected for the same reasons of obviousness as used above.

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Prior Art

Sawaguchi et al U.S. Patent No. 5,287,228 is cited as of interest for disclosure of a device for peak detection in a magnetic reproducing device.

Allowable Subject Matter


7. Claims 5, 6, 8-17, 22, 23, and 25-34 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniell L. Negrón whose telephone number is 571-272-7559. The examiner can normally be reached on Monday-Friday (8:30am-5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David R. Hudspeth can be reached on 571-272-7843. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

DLN 
August 12, 2005


DAVID HUDSPETH
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